IN THE CLAIMS:

In line 2 of claim 11, replace "concentration" with --relative concentrations--.

Cancel claims 14 and 16 and replace them with new claims 27 and 28, respectively:

27. The method of claim 11 wherein said operation of matrix algebra is determining the inner product of two vectors $V_i$ and $W_i$, and said method compriscs:

(i) obtaining for each vector $V_i$ and $W_i$, sets of single-stranded oligomcrs $E_i$ and $\underline{E_i}$ representing the components of thc vector, wherein the concentrations of the oligomers $E_i$ and $\underline{E_i}$ are proportional to the absolute values of the amplitudes of the components they represent; and

also obtaining a set of single-stranded oligomers $E_i$ and $E_i$ representing the components of vector $\underline{W_i}$ that are complementary to said oligomcrs representing vector $W_i$, wherein the relative concentrations of the oligomcrs representing $\underline{W_i}$ are proportional to the concentrations of their complementary oligomers in $W_i$,

(ii) combining samples of the oligomers representing vector $V_i$ with samples of the oligomers representing vectors $W_i$ and $\underline{W_i}$ in separate reaction mixtures and measuring the ratcs of hybridization of said mixtures, and obtaining a numcrical value proportional to the inner product of the two vectors from said rates of hybridization.

28. The method of claim 11 wherein said operation of matrix algebra is obtaining the inner product of a matrix and a vector, and

said method comprises

(a) obtaining a set of single-stranded oligomers representing matrix **T**, wherein each